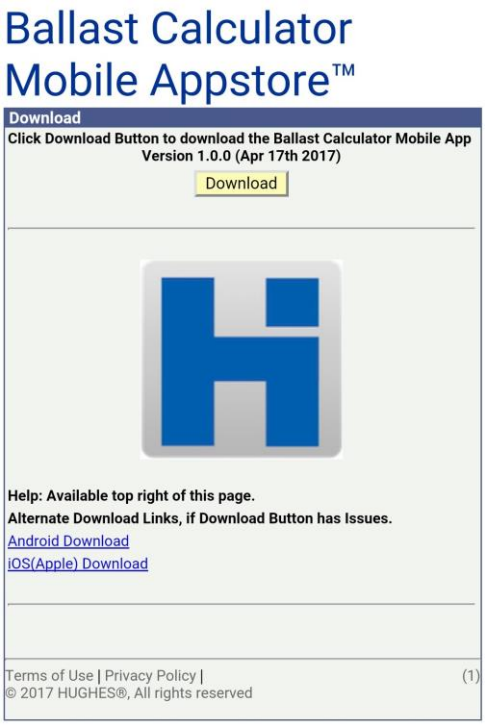
1 Hughes Ballast Calculator

The purpose of this document is to describe the procedure for downloading, installing, and using the required Hughes Ballast Calculator that will be used on every VSAT installation requiring a NPMM. The download link will be made available May 14th 2017 from the Quick actions section from the installer portal. This will be a stand-alone app that will be installed on the installer's mobile device. This app will be used to determine the correct amount of ballast blocks required for the installation of the NPMM at an individual site based on latitude, longitude, wind exposure, and site elevation.

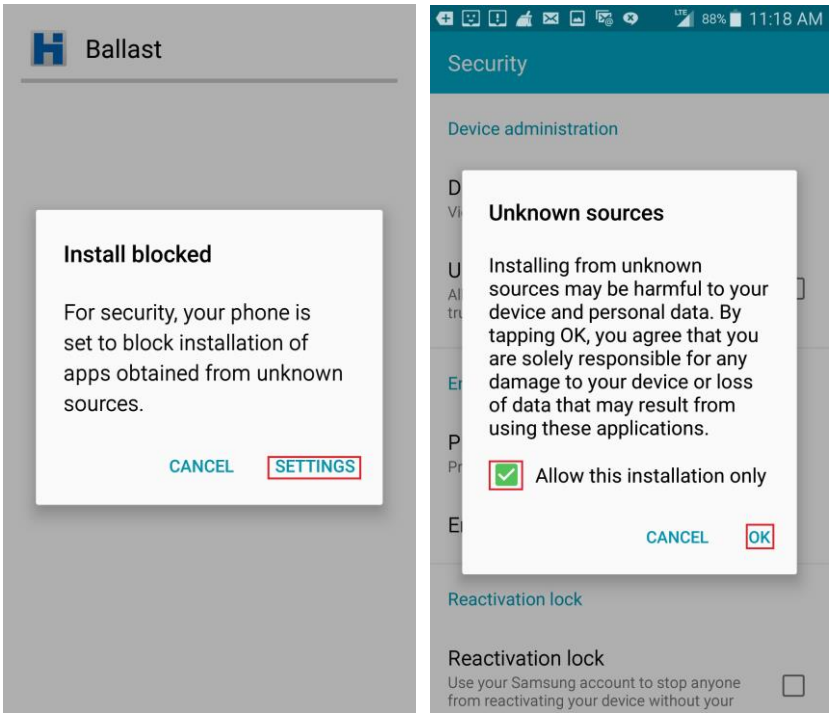
1.1 Downloading and installing the App from the Installer portal

1. Log into the installer portal
2. Go to the Quick actions section and select the link

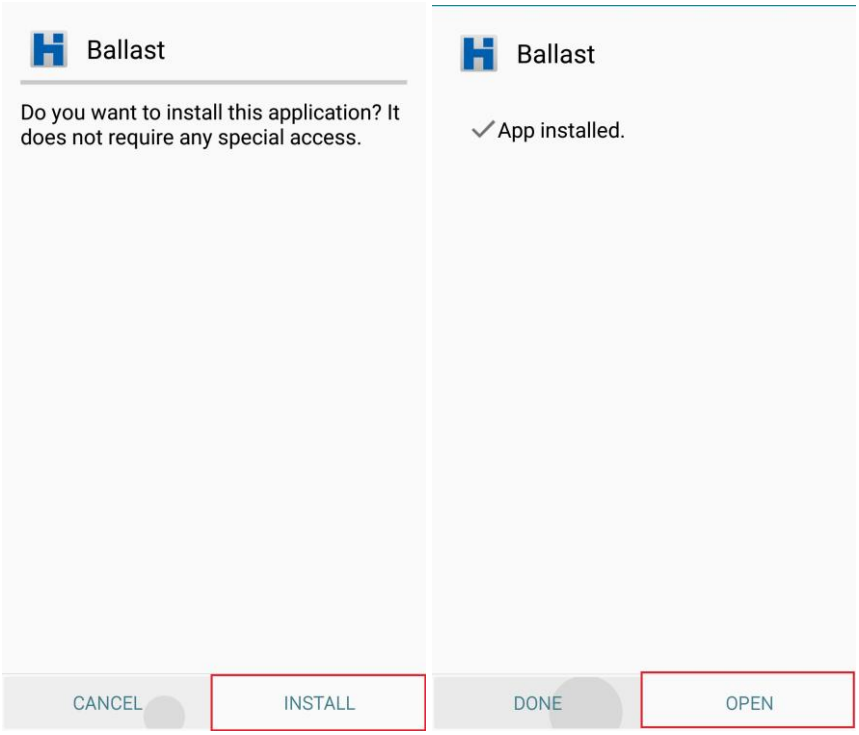
3. Select the download link for your mobile device type



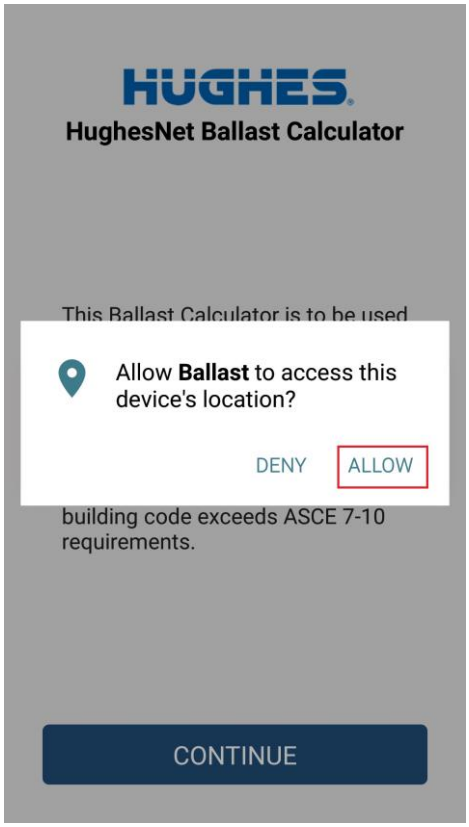
4. During installation you may see a popup warning stating your installation is blocked from unknown sources, you must allow it for this installation.
5. Go into your device settings and select "Allow this installation only" and select ok.



6. Select Install.
7. Select Open.



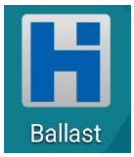
8. The Ballast Calculator will need to access your device location to auto populate the sites latitude and longitude.



9. Select *Allow* then select *Continue* to launch the application.

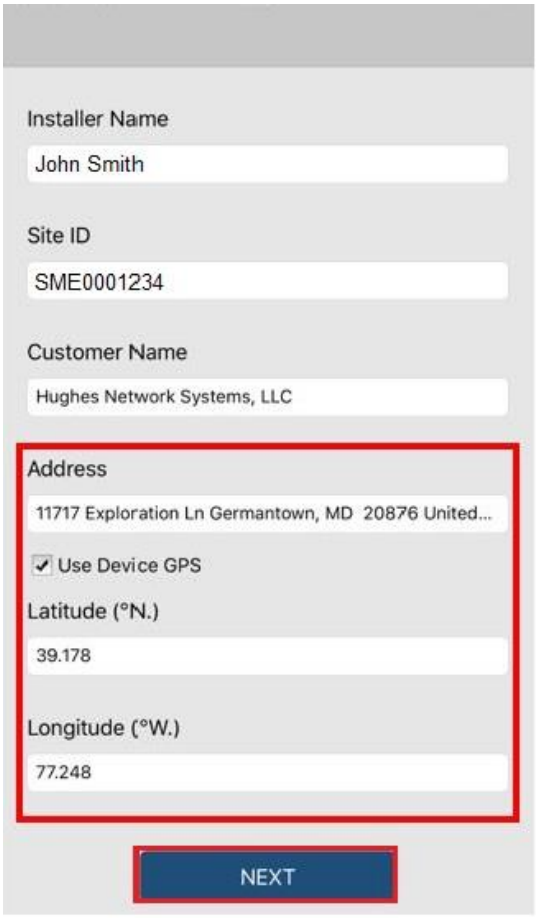
1.2 Using the App to calculate the ballast requirements

1. Launch the App by selecting the Icon on your smart device.



2. Input the installer Name, FSO and Customer name in the appropriate fields.
3. Select use GPS to determine your latitude and longitude for the site you will be installing and allow it to auto populate the fields.

Note: The Ballast Calculator can be used without the GPS enabled but requires the manual entry of the sites physical address.



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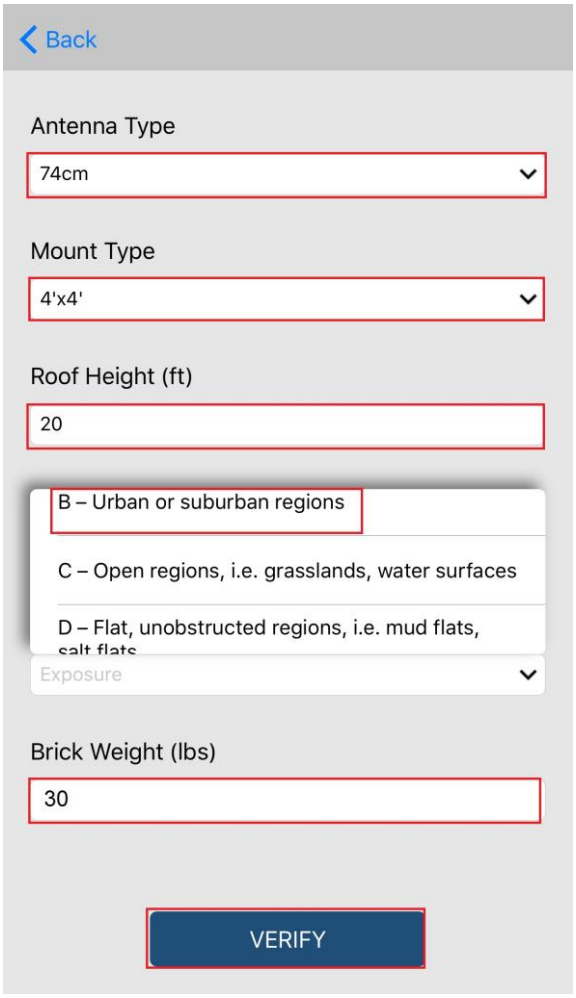
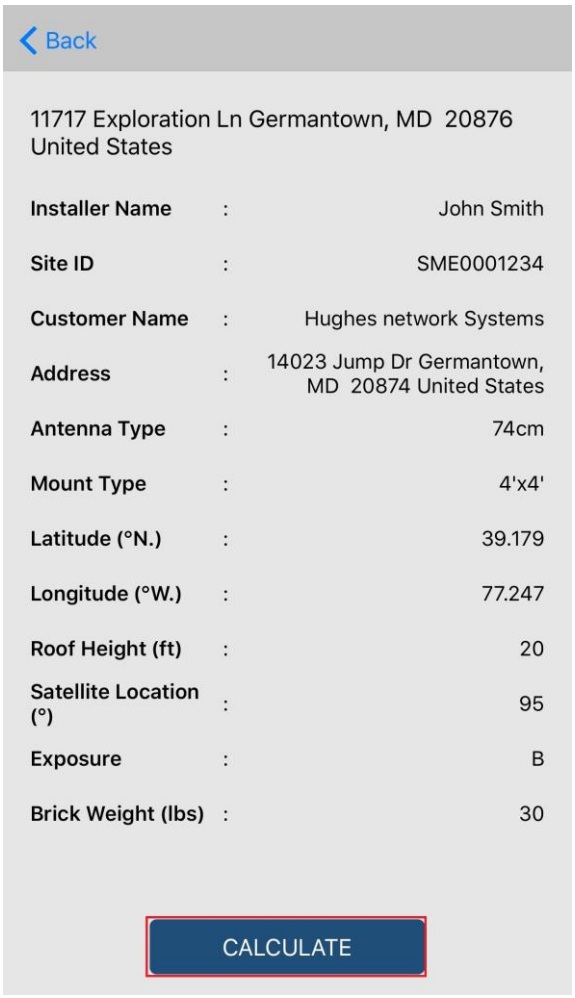
4. Select *Next.*
5. From the drop down menu select the correct size antenna you will be installing at the site.
6. Select the size of the mount you will be installing at the site for your antenna.
7. Input the height of the building the antenna will be installed on.
8. Input the Satellite Location the antenna will be aligned to.



9. From the drop down menu select the appropriate wind exposure rating for the location
10. Input the weight of the ballast blocks you will be using with the NPMM
11. Select *Verify*



12. Verify that the information entered is correct and select *Calculate*
13. Using the calculations determine the correct ballast weight and the correct number of ballast blocks required for the site and continue the installation of the NPMM.

Installation Date and Time	:	10 May 2017 01:47 PM
Installer Name	:	W
Site ID	:	W
Customer Name	:	W
Address	:	100 Lakeforest Boulevard,Gaithersburg, MD 20877 United States
Antenna Type	:	74cm
Mount Type	:	4'x4'
Latitude (°N.)	:	39.152
Longitude (°W.)	:	77.209
Roof Height (ft)	:	20
Satellite Location (°)	:	95

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Elevation (°)	:	41.042
Azimuth (°)	:	206.942
polarization (°)	:	20.57
Wind Speed (mph)	:	120
Brick Weight (lbs)	:	30
Required Ballast Weight (lbs)	:	199.0
Number of Ballast Blocks Needed	:	7
Roof Live Load (lbs)	:	277.2
Roof Live Load Pressure (lbs/ft^2)	:	17.32

Disclaimer

These results conform to ASCE 7-10 requirements. Check with local building code authority to see if local building codes exceed ASCE 7-10 requirements.

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